

Docket No. 2002P15652US
Express Mail No. EV 330464181US

What is claimed is:

1. A method for representing HMI user screens comprising the activities of:
 - obtaining an organization and a hierarchy of a collection comprising a plurality of HMI screen nodes;
 - determining an arrangement of the collection; and
 - rendering the collection according to the arrangement.
2. The method of claim 1, further comprising calculating a position of a leaf.
3. The method of claim 1, further comprising calculating a position of a visible leaf.
4. The method of claim 1, further comprising calculating a position of a parent.
5. The method of claim 1, further comprising detecting a collision.
6. The method of claim 1, further comprising updating a position of a parent.
7. The method of claim 1, further comprising updating a position of a parent upon detecting a collision.
8. The method of claim 1, further comprising recursively calculating a position of each of the plurality of HMI screen nodes.
9. The method of claim 1, further comprising recursively calculating a position of each of the plurality of HMI screen nodes and updating a position of a parent upon detecting a collision.
10. The method of claim 1, further comprising changing the visibility of a node.
11. The method of claim 1, further comprising changing the visibility of a node and children of the node.

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12. The method of claim 1, wherein the arrangement is a tree arrangement.
13. The method of claim 1, wherein the arrangement is a vertical tree arrangement.
14. The method of claim 1, wherein the arrangement is a horizontal tree arrangement.
15. The method of claim 1, wherein the arrangement is rendered with equal inter-generational node spacing.
16. The method of claim 1, wherein the arrangement is rendered with equal intra-generational node spacing.
17. The method of claim 1, wherein the arrangement is rendered with each parent aligned centrally to all children of that parent.
18. The method of claim 1, wherein the arrangement is rendered with all nuclear children separated equally.
19. A machine-readable medium containing instructions for activities comprising:
obtaining an organization and a hierarchy of a collection comprising a plurality of HMI screen nodes;
determining an arrangement of the collection; and
rendering the collection according to the arrangement.
20. A device for providing a representation of user screens for an HMI comprising:
means for obtaining an organization and a hierarchy of a collection comprising a plurality of HMI screen nodes;
means for determining an arrangement of the collection; and
means for rendering the collection according to the arrangement.